

In re Application of: Ariel PELED et al
Serial No.: 10/533,452
Filed: May 2, 2005
Final Office Action Mailing Date: October 20, 2010

Examiner: Kenny S. LIN
Group Art Unit: 2452
Attorney Docket: 29837
Confirmation No. 4135

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1 - 357 are in this Application. Claims 1 – 175, 199 – 227, 230 – 251, 260 – 262, 272 – 277, 283, 287 – 297, 299, 302 – 329, 331 – 333, 336 – 343, and 353 - 357 have been withdrawn from consideration. Claims 176 – 198, 228, 229, 252 – 259, 263 – 271, 278 – 282, 284 – 286, 298, 300, 301, 330, 334, 335 and 344 – 352 have been rejected. Claims 1 – 175, and 355 - 357 have been canceled without prejudice herewith. Claims 176, 330 and 344 have been amended herewith. New claim 358 has been added.

Amendments To The Claims

35 U.S.C. § 102 Rejections

Claims 176 and 344 have been rejected over Bisbee.

The Examiner's rejection is respectfully traversed for the reasons given below. Nevertheless claims 176 and 344 have been amended in order to expedite prosecution.

Restoration to consideration of the withdrawn species is hereby requested on the basis that amended claims 176 and 344 are allowable and generic to all the species.

Regarding the issue of novelty, applicant argued in the previous response that the present claims are distinguished over Bisbee in that Bisbee *does not permit the information object to evolve*. The claims by contrast define information units that change over time where identification is made based on basic information units that are identified within the changing information and which do not change over time.

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The Examiner, in his Response to Arguments, points to e –original objects as the information unit that evolves, and the electronic signature as the unchanging unit within.

Examiner then specifies in his remarks that Bisbee allows the e-original object to evolve in order to extend the validity of the digital signature.

Applicant respectively traverses. Allowing the e-original object to evolve in the face of Bisbee's electronic signature would have one effect and one effect only. It would *invalidate* the original signature.

Applicant would like to preface his remarks to the present rejection with the following remarks.

An electronic signature automatically *fails* the identification process if anything has changed in the information object. Therefore *as an absolute first principle* the electronic signature and the data it is protecting *do not change*. If the electronic signature or the data being protected did evolve then the verification would fail and there would *not be an electronic signature*.

Should the Examiner still be in doubt as to this point, he is asked to contact applicant's attorney for the purposes of arranging a telephone interview to discuss this basic principle and how it applies to Bisbee. It is respectfully submitted that there is nothing in Bisbee that says anything different than the above basic principle.

As mentioned, the claim refers to *information objects* which *evolve*, but which contain within them *basic information units* that *do not change*.

Based on the above remarks, we now turn to the Bisbee citation.

Bisbee column 4 lines 50 – 67 does not talk about information or elementary information units that evolve since this passage only talks about an electronic signature. As mentioned above, *an electronic signature does not evolve and neither does the data it protects*. It can merely be replaced by a new signature at the end of its time limit.

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Bisbee column 4 lines 50 – 67 and column 5 lines 1-5 merely discuss *how long* this non-changing electronic signature *may be considered valid*. If it is left for too long then decryption becomes possible for example.

The passage is entirely silent on the possibility that information could or should evolve. The passage says *nothing* about the possibility of extending the time limit of the electronic signature by allowing any information to evolve.

Bisbee column 8 lines 48 – 67 also does not talk about information which evolves. Bisbee column 8 lines 48 to 67 merely talks about different features that may be extracted from the information. One of the features that may be extracted from the information is a time stamp. However a time stamp is a static item of data fixing the time that a certain action was carried out. Thus I may time stamp this page as being written at 12:30 on 30th December 2010. *There is nothing in this paragraph that refers to an evolving piece of information.*

Considering the Examiner's response to arguments in greater detail, Examiner states in the said response to arguments that Column 4 lines 50-67 teaches that an e-object can be modified in order to extend the validity of an electronic signature. Applicant respectfully traverses for the following reasons:

First of all, Column 4 lines 50 – 67 merely states that the validity of a signature *lasts* for a certain amount of time. There is no mention of *modifying* the information object or the signature to extend the time. This is beside the point *that no known digital signature could have its life extended in this way*. Digital signatures can only be *recreated* using the private key held by the signer, and based on specific fixed information.

All that is mentioned in the cited passage is that the validity period is also not indefinite but is set so as to limit the chance for compromise of the signature. This means that the period is fixed when the signature is set up. At the time of set up I can provide a one-year signature or a two-year signature or the like. There is *no mention* of being able to *modify* the signature or the data say at the end of the one year period to extend it to two years.

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Secondly, *the skilled person knows that one does not modify digital signatures or keep the same digital signature with modified data*. If one wanted to extend the validity of the document beyond the validity of an initial signature, *then the skilled person would know that the way to do this is to provide the new data and generate a new signature*.

The above is respectively believed to establish novelty.

Applicant has taken the opportunity to add a definition of "evolution" as a change over time to the independent claims, in order to further establish novelty.

Regarding inventive step, applicant stands by and refers to the arguments submitted in the previous response.

The present claim, by contrast with Bisbee, requires that the elementary information units identify the information objects *despite the information objects being subject to evolution*. In Bisbee, by contrast, *nothing is subject to evolution*. See at least Bisbee lines 64 – 66 (forgery resistant indicium), column 6 lines 21 – 24 (submitted signed information objects...testing integrity of the contents...).

Bisbee is silent on the possibility of managing the information in the face of modification. The importance that Bisbee attaches to the information being *an exact copy* precludes even *allowing* the information to be modified. This refers to *any of the information*, not just the digital signature.

Taking a broader view of the present embodiments, these relate to the management of information that evolves with time. In order for computerized systems to manage information the information must be identified, but computers generally are good at exact matching and notoriously bad at fuzzy or inexact matching.

The skilled person, faced with the present problem of identifying data that evolves over time would consult Bisbee at al, as cited by the Examiner but would see only that exact matching is suggested – as discussed above. Bisbee uses exact matching to find the information objects, and indeed the checking of signatures that Bisbee recommends is not only an exact match but actually explicitly rejects matches

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where the slightest change has been made, since the signature no longer matches the document.

The skilled person, seeing that Bisbee is not adequate for data that changes over time, may then be expected to go on to consider various systems of fuzzy searching, as this seems the obvious approach.

The present embodiments however take a *counter-intuitive* approach. Contrary to what the skilled person would expect, exact matching *is* used. Obviously the information objects have changed but *basic information units* do not change. Hence what is done is to search using *exact matching* for the *basic information units* and then use *these information units* to *learn about the identity of the information objects* and thus apply management to the information objects even though they may have been subject to evolution over time of their content and they themselves *cannot* be found using exact matching.

The following, not found in Bisbee, and believed to be counter-intuitive to the skilled person for the reasons given above, are thus regarded as patentable subject matter:

monitoring information usage to detect information objects therein, said information objects being *subject to said evolving*;

finding elementary information units within at least one detected information object, said elementary information units *remaining constant under said evolving*;

deducing *information about an identity of said information object* from identification of said elementary information units found within said information object; and

managing said information object *based on said information deduced about said identity from said elementary information units*, thereby to provide management of said information that is resilient to said evolving.

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New claim 358 comprises claim 176 as amended above, together with the feature of claim 330. The new claim is believed to be novel and inventive for the same reasons as given above.

The remaining pending claims are believed to be allowable for being dependent on allowable main claims.

The remaining withdrawn claims are believed to be allowable as being dependent on an allowable generic claim and it is requested that these are restored to consideration.

In view of the above amendments and remarks it is respectfully submitted that claims 176 - 354 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

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Date: January 19, 2011

Enclosed:

- Request for Continued Examination (RCE)